



## Civilian Conservation Corps Dams

### Introduction

From 1933 to 1942 the Civilian Conservation Corps (CCC) constructed water control dams in Tucson Mountain Park (TMP) and what is now the Tucson Mountain District of Saguaro National Park (TMD). The purpose of the dams was erosion control as well as to promote wildlife by establishing artificial watering sources.

There are a total of 28 CCC dams at TMD and 3 at TMP; Of the 28 dams at TMD, 21 are constructed of rock and concrete, five are Gabion dams and two are earthen dams.

### Description

*Rock and Concrete Dams.* As the name implies, these dams were constructed of rock with concrete mortar. Many of the rock and concrete dams are battered, meaning they have a slight backward slant to them. These dams range in size from 12 to 30 feet long and from 3.5 feet to 18 feet high.

The rock and concrete mortar dams are positioned within deeply entrenched drainages, and are physically tied into bedrock exposures. All of these dams have silted up; only their downslope face is visible. Apparently all of these dams were constructed between 1934 and 1936.

*Gabion Style Dams.* These dams are constructed of stacked rock, without mortar, held in place with 6" by 6" wire mesh anchored to wash bottom with 3" diameter metal posts. The dams may also be anchored at their ends by wire and metal posts. Five of these types of dams were



Rock and concrete mortar dam in drainage below Gould Mine.

constructed by the CCC. Some of the CCC documents refer to this type of dam as a "sausage" dam.

The largest of the Gabion dams measure 60 feet long by three feet high.

*Earthen Dams.* The two large earthen dams, referred to as Mine Dam 1 and 2, are constructed principally of earth and bolstered with a rock facing (or riprap) held in place with wire mesh along the upstream side. Both these dams have rock-lined spillways along their western end. The spillway allows water to build up behind the dam but keeps the water from overtopping the dam which would cause catastrophic erosion to their downstream side. Both of these dams are currently in a Pima County owned inholding within TMD.

The largest of these dams measure approximately 116 feet long by 15 feet high.

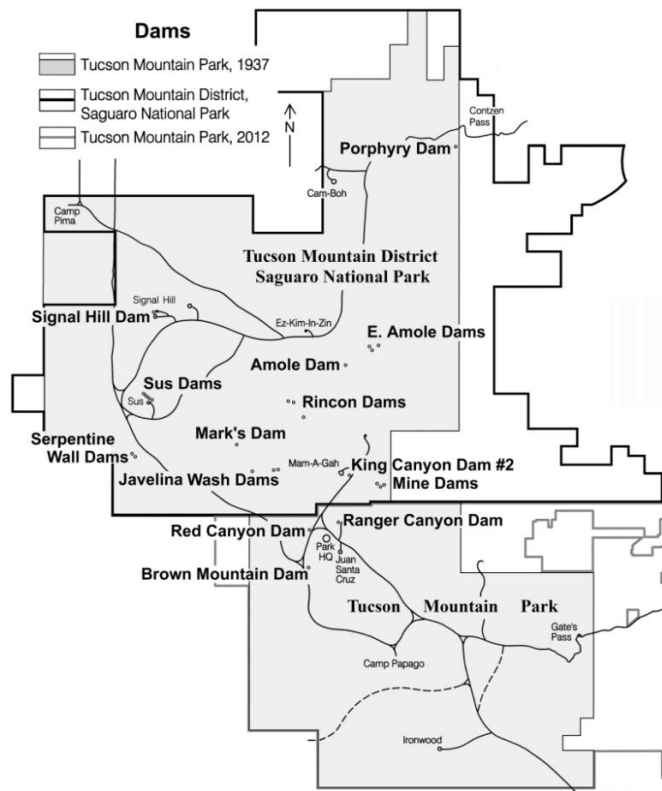
*Condition.* All of the rock and concrete dams at TMD are in good condition; however a few of them do have minor erosional issues. Of the five Gabion dams only one is complete and in good condition. Three of the dams have had a major portion of their rock work washed away and very little remains of the fifth Gabion dam. The larger of the two earthen dams has been breached along its eastern end while the smaller dam is complete and in good condition.



One of the Gabion style dams at TMD.

## Locations

All of the dams are located along major drainages within the park and are therefore readily accessible to those who hike up the drainages (see Visiting the Dams for off trail hiking restrictions). Two of the dams are easily visited. One of these dams is located at Sus picnic area and is easily seen from one of the picnic tables along the south side of the drainage that forms the northern edge of Sus. The other easily visited dam is at Signal Hill. Here the CCC incorporated the dam into the trail network.



Map of TMD/TMP showing locations of the CCC dams.

## Visiting the Dams

Remember, for both Districts there is no off trail hiking below 4500 feet! This means visiting the dams is prohibited except at Sus and Signal Hill where visitors can easily view the dams. Visiting the dams can be dangerous. One should never attempt to climb the bedrock and never climb on the dam. Standing on top of a dam is dangerous as the downslope face of the dam is a sheer drop. The dams are also susceptible to damage from well-meaning visitors. Some of the dams have thin concrete caps that are easily cracked and knocked off the tops of the dams. Please stay off the dams.



Red Canyon Dam at TMP in the 1930s. This photo shows the newly completed dam with an unidentified figure standing at the bottom of the interior face of the dam. Silt has since filled this area to the top of the dam. Today the eastern half (left side) of the dam is gone.

## Tucson Mountain Park Dams

There are three known dams at TMP; all are rock and concrete mortar dams. The three dams are the Brown Mountain Dam, the Ranger Canyon Dam, and the Red Canyon Dam (names derived from CCC documents). None of these dams have survived the years as well as the ones at TMD. Both Brown Mountain Dam and Ranger Canyon Dam have lost the entire surface of their downslope face, leaving the rock-rubble and concrete fill center of the dams exposed. While they still retain structural integrity their failure is only a matter of time. The Red Canyon Dam has been breached, and approximately one-half of the dam is gone.

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